Please amend the paragraph beginning at line 17 of page 20 to the following:

-- Preferably, a DNA will be introduced that comprises [encodes] a desired gene, e.g., a gene that encodes therapeutic polypeptide, growth factor, enzyme, etc., under the regulatory control of sequences operable in avians. Preferably, these regulatory sequences will be of eukaryotic origin, most preferably avian, e.g., chicken regulatory sequences. Promoters operable in avian cells, e.g., derived from avian genes or viruses are known in the art. --

IN THE CLAIMS:

Please amend Claims 13, 18, 23 and 26 as shown below:

13. (Twice Amended) The method of Claim 12, wherein said nucleic acid comprises a nucleotide sequence that encodes a polypeptide and is functionally linked to gene expression regulatory sequences that are operable in an avian cell.

18. (Twice Amended) The method of Claim 17, wherein said nucleic acid comprises a nucleotide sequence that encodes a polypeptide and is functionally linked to gene expression regulatory sequences that are operable in an avian cell.

23. (Twice Amended) The method of Claim 12, wherein said nucleic acid encodes a polypeptide that is a growth factor or an enzyme.

26. (Twice Amended) A method of producing germline and somatic cell chimeric avians which comprises:

(i) isolating primordial germ cells (PGCs) from a Stage XII-XIV avian embryo;

(ii) maintaining such PGCs in a tissue culture medium containing at least the following growth factors:

(1) leukemia inhibitory factor (LIF),

(2) basic fibroblast growth factor (bFGF),

(3) stem cell factor (SCF) and

(4) insulin-like growth factor (IGF),

for a sufficient time to produce embryonic germ (EG) cells;

(iii) transferring said EGs into a recipient Stage X avian embryo of the same species as the avian used to obtain said isolated PGCs;

(iv) allowing said recipient avian embryo to develop into a germline and somatic cell chimeric avian having germline and somatic cells that have the genotype of said PGCs.